

REMARKS/ARGUMENTS

In the Office action of September 14, 2006 claims 1-7, 9-22, 24-37, 39-53, 55-60, and 62-73 were rejected. Claims 1, 16, 30, and 46 has been amended to overcome the claim rejections.

Claims 1-7, 9-22, 24-37, 39-53, 55-60, and 62-73 stand rejected as failing to comply with the written description requirement. In particular, the office action asserts that the limitation in claim 1 “wherein said transmitter is not located in a housing spaced apart from and surrounding said transmitter” and similar limitations in claims 16, 30 and 46 are not taught in the specification, as originally filed, and are, therefore, new matter. The claim language of claims 1, 16, 30 and 46 has been modified to generally recite the transmitter is not located in the enclosure. The applicant respectfully requests withdrawal of the rejection.

Claims 1-7, 9-22, 24-37, 39-53, 55-60, and 62-73 stand rejected as being unpatentable over admitted prior art (FIG. 1) (Admission) in view of Hoadley (US Patent 3,493,760) (Hoadley). FIG. 1 discloses a pilot relay couples a low voltage signal from a control panel to a higher voltage signal to an electrical device located in an enclosure and which is located within a pilot relay housing that is necessarily outside of the contactor enclosure due to electrical code requirements. The electrical code requirements do not permit passing a low voltage conductor through the contactor enclosure and, therefore, the high voltage signal must be passed through the wall of the contactor enclosure from the external pilot relay on conductors that penetrate the wall of the enclosure. This requires fishing the wires through an opening in the contactor enclosure and interconnection with the pilot relay inside the pilot relay housing. This is difficult and time consuming and necessitates a relatively large pilot relay enclosure (pg. 2, lines 4 11) which increases the size of the assembly comprising the pilot relay housing and the contactor enclosure. To overcome these problems with the prior art, the claimed invention couples a lower voltage signal to a higher voltage signal with an optical signal that is transmitted through the wall of the contactor enclosure.

Hoadley discloses the use of an optical coupling to replace an electrical conductor between a transducer to located outside of an magnetically shielded enclosure and an instrument located within the enclosure to prevent spurious signals superimposed on a desired data signal carried on the conductor from entering the shielded enclosure (col. 1, line(s) 29-54). Compton electrons ejected from the cable materials and large ground currents in a nuclear detonation environment can generate spurious signals in the cabling connecting the transducer and the instrumentation which can disrupt the data signal effectively negating the effectiveness of the enclosure's magnetic shielding.

According to the office action, it would be obvious to replace the electrical coupling means disclosed by the Admission with an optical coupling as suggested by Hoadley to prevent spurious currents from entering the enclosure to interfere with sensitive instruments. In FIG. 1, the pilot relay provides the electrical means of coupling the low voltage signal from the control panel, at the relay's input terminal, to the high voltage signal at the output terminals of the pilot relay. If the electrical coupling means, the pilot relay, was replaced with an optical coupler, as suggested by the office action, both the high voltage and low voltage signals would still originate outside of the contactor enclosure and it would be necessary to penetrate the wall of the enclosure with conductors to conduct the high voltage signal to the contactor located inside the enclosure. The applicant respectfully submits that neither the Admission nor Hoadley teaches or suggests all of claim limitations of claims 1, 16, 30, and 46, as amended. Further, the applicant respectfully submits that Hoadley does not suggest the use of an optical coupling in the absence of spurious signals that would effect device inside the enclosure. The applicant respectfully submits that claims 1, 16, 30, and 46 are not obvious from the combination of the Admission and Hoadley and, likewise, dependent claims 2-7, 9-15, 17-22, 24-29, 31-37, 39-45, 47-53, 55-60, 62-73 are not obvious the combination. The applicant requests withdrawal of the rejection.

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

The applicant submits that no fees are due with submission of this Amendment but an extension of time is necessary, the applicant conditionally petitions for such an

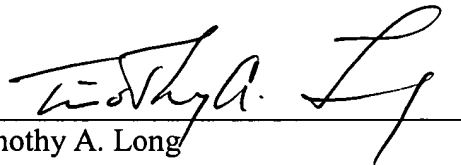
Appl. No. 09/881,300
Amdt. dated 12/14/2006
Reply to Office Action of 09/14/2006

Extension of Time. The Commissioner is hereby authorized to charge any additional fees related to this amendment or credit any overpayment, to Deposit Account No. 03-1550.

Respectfully submitted,

CHERNOFF, VILHAUER, McCLUNG & STENZEL

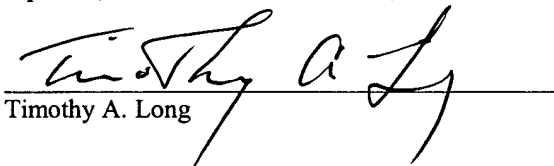
Dated: December 14, 2006

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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop RCE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on December 14, 2006.

Dated: December 14, 2006


Timothy A. Long